System Design Study Cohort

Our main goal for the upcoming 16-week study cohort is to gain in-depth knowledge of system design by analyzing the core system of 8 world-class applications.

Week 1: System Design Fundamentals

- Basics of System Design
- Computer Architecture
- Application Architecture
- Different Tiers in Application Architecture
- Client-Server Model

Week 2: Networking Fundamentals

- Basics of Networking
- TCP IP
- Five-Layer Network Model
- IPv4 in Depth
- Network Protocols
- Firewall
- UDP
- VPNs & Proxies
- Peer-to-Peer Network

Week 3: Web Architecture 101

- Browsers
- DNS
- Web Servers
- Load Balancer
- Caching
- CDN

Week 4: DS & Algo for System Design

- Stacks & Queues
- Heap
- BST
- BFS & DFS
- Graph

Week 5: Database/Storage

- Storage Paradigm
- SQL & NoSQL
- Replication and Sharding
- CAP Theorem
- Object Storage
- ACID & BASE Properties for Database Selection

Week 6: Advance System Design Concepts

- API Design
- Message Queues
- Load Balancing Strategies
- Server Clustering
- Consistent Hashing

Week 7: Advance System Design Concepts 2

- Leader Election
- Rate Limiting
- Logging and Monitoring
- Polling and Streaming
- MapReduce
- Security and HTTPS

Week 8: Design Amazon

Week 9: Design Facebook News Feed

Week 10: Design Google Drive

Week 11: Design Netflix

Week 12: Design UBER

Week 13: Design Discord

Week 14: Design Airbnb

Week 15: Design Google Map

Week 16: How to Crack System Design Interview